

# Cool Roof - Retrofit Program

California Energy Commission  
Peak Load Reduction Program



[www.energy.ca.gov/peakload](http://www.energy.ca.gov/peakload)

**NOTE: The information in this flyer refers to the current Cool Roof Retrofit Program. The Commission's new Cool Savings Program is scheduled to begin soon. The new program will include additional roof credits and eligibility criteria.**

## What Is a Cool Roof?

Cool roofs stay 50 to 60 °F cooler during peak summer conditions than traditional hot roof materials. The scientific definition of a cool roof is:

- Solar reflectivity, the ability to reflect the sun's energy, is greater than 65%
- Emissivity, the ability to emit stored heat, is greater than 80%

Most traditional roof materials have solar reflectivities of 30% or less and are "hot". A growing number of roof products are qualified as at least 65% reflective by the Energy Star Roofing Products list ([www.energystar.gov](http://www.energystar.gov)). At this point all of these products are bright white in color. Although metal roofing can be highly reflective, bare metals have low emissivities that keep these products hot. Therefore bare metal roofing and metal-based coatings are **not** cool roof products.

## Who's Eligible?

Building owners or property managers can receive incentives if their buildings meet the following characteristics:

### Building:

- Non-residential or multi-family use
- Low slope roof (less than 2 in 12 slope)
- Not in climate zones 1 or 16 (see map)
- Mechanically cooled in the summer

### Existing Roof:

- Solar reflectivity less than 30%
- No more than R-30 insulation
- No less than R-10 insulation

### Existing Roof Ducts:

- Solar reflectivity less than 45%
- No more than R-8 insulation
- No less than R-2.1 insulation

## Incentive Levels

Since a cool roof has the potential to save more energy in a building with lower insulation levels, the incentives for this program vary according to the existing roof/ceiling insulation levels.

### Roof incentives:

- R-25 to R-30 - \$0.05 per square foot
- R-15 to R-25 - \$0.10 per square foot
- R-10 to R-15 - \$0.15 per square foot
- Less than R-10 - \$0.15 per square foot if insulation is raised to R-10 or above

### Duct incentives:

- \$0.10 per square foot for an area based on half the duct's total perimeter

## Program Requirements

To qualify for the Cool Roof Retrofit Program a roofing project must:

- Use only non-metallic roofing materials with at least 65% reflectivity from the US EPA Energy Star Roofing Products list ([www.energystar.gov](http://www.energystar.gov)).

- Have warranties from either the roofing contractor or the roofing manufacturer to cover 5 years labor and 10 years of materials costs in the event of cracking, flaking, peeling or leaking.
- Applications must be turned in by October 31, 2001.

The steps in the process for receiving an incentive are as follows (underlined items are the customer's responsibility):

- 1) Submit a "Request for Pre-Retrofit Inspection" to your area's Regional Program Administrator. (This form can be downloaded at [www.pstvnrg.com/coolroofs](http://www.pstvnrg.com/coolroofs).)
- 2) The Regional Program Administrator will schedule an inspection of your roof
- 3) Qualifying buildings will receive a "Notice of Eligibility"
- 4) Notify your Regional Program Administrator of prospective work dates and any weather delays that may arise
- 5) Install your cool roof before the completion deadline
- 6) Turn in "Final Application for Incentive" with receipts no more than 2 weeks after installation. This form can be downloaded at [www.pstvnrg.com/coolroofs](http://www.pstvnrg.com/coolroofs).)
- 7) Receive your incentive in 6 to 10 weeks

### Cool Roof Facts

There are two types of cool roofing:

*Cool roof coatings* are surface treatments best applied to roofs in good condition. They have the consistency of thick paint, although they have additives to improve their adhesion, durability and resistance to dirt, algae & fungus. "Cementitious" coatings have cement particles, "elastomeric" coatings contain polymers to improve adhesion and reduce brittleness. Both range in cost from \$0.75 to \$1.50 per square foot depending on the job and the contractor.

*Cool single-ply roofing* is a catch-all term for any cool roofing product that comes in a single pre-fabricated sheet and is applied in a single layer. Single-ply's come in a variety of materials such as PVC, TPO, Hypalon and CPA. Single-ply's are a good choice for a new roof or a roof that requires extensive repair. Their cost varies from \$1.50 to \$3.00 per square foot depending on the job and the contractor.

### Cool Roof Benefits

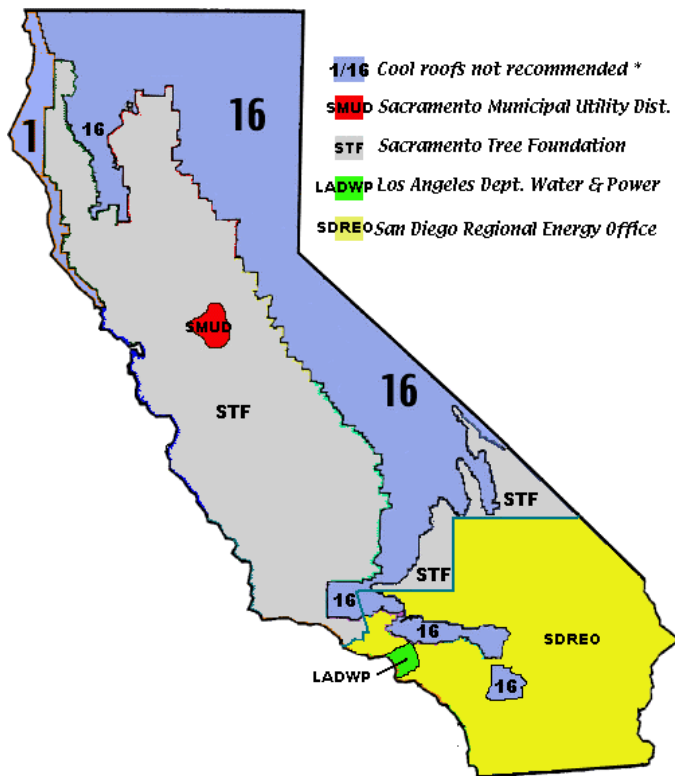
Because cool roof materials stay 50 to 60 °F cooler under peak conditions, they offer many benefits to building owners and the community at large, including:

- **Reduced peak electricity demand**
- **Reduced cooling energy use**
- **Improved building comfort**
- **Reduced building maintenance expense and roofing waste ("tear-offs" due to neglect)**

- Reduced heat island effect
- Reduced air pollution

## Regional Program Administrators

There are four Regional Program Administrators of the Cool Roof Retrofit Program as shown below.



Sacramento Tree Foundation (STF)  
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**WEB SITE - For More Information**  
<http://www.consumerenergycenter.org/coolroof/>